

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

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APR 28 2004

U.S. PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

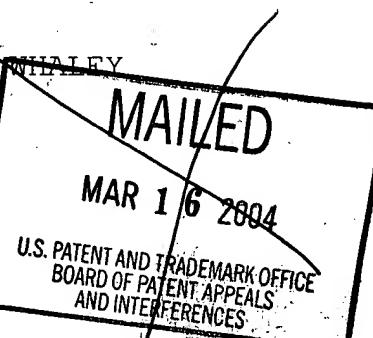
Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte LANCE R. CARLSON, JEFFREY L. WHALEY  
and ROBERT L. METZ

Appeal No. 2002-1306  
Application No. 09/224,202



ON BRIEF

Before HAIRSTON, JERRY SMITH, and DIXON, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

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Application No. 09/224,202

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 47-50, 53-58, 61-66, 87, 88, 91-98, 101-106, 108-113, 115, 118-123, 125 and 126. Claims 1-46 had been cancelled. Claims 51, 52, 59, 60, 67-86, 89, 90, 99, 100, 107, 114, 116, 117 and 124 had been withdrawn from consideration by the examiner as the result of a restriction requirement. An amendment after final rejection was filed on May 2, 2001 and was entered by the examiner. This amendment cancelled the non-elected claims. Therefore, this appeal is directed to all the claims still pending in this application.

The disclosed invention pertains to a disk drive that includes a detection circuit that determines whether a head is within an acceptable flying height range over a disk in response to first and second data patterns stored on the disk.

Representative claim 87 is reproduced as follows:

87. A disk drive, comprising:

a disk having a plurality of concentric tracks for storing data, the tracks including a first track having a first data pattern with a first frequency and a second data pattern with a second frequency that is higher than the first frequency, wherein the first and second data patterns are located in separate non-overlapping circumferential portions of the first track;

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a head for reading data from and writing data to the disk;  
and

a detection circuit that determines whether the head is within an acceptable flying height range in response to the first and second data patterns while the head is at a substantially constant flying height and independently of flying height data obtained from the disk drive at other than the substantially constant flying height.

The examiner relies on the following references:

Gyi et al. (Gyi)	4,146,911	Mar. 27, 1979
Brown et al. (Brown)	4,777,544	Oct. 11, 1988

The following rejections are on appeal before us:

1. Claims 47-50, 53-58, 61-66, 87, 88, 91-98, 101-106, 108-113, 115, 118-123, 125 and 126 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

2. Claims 87, 88, 93, 97, 98, 103, 110, 111, 120 and 121 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the disclosure of Brown.

3. Claims 92, 102, 108, 109, 112, 115, 118, 119, 122, 125 and 126 stand rejected under 35 U.S.C. § 103(a) as being, unpatentable over the teachings of Brown in view of Gyi.

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Rather than repeat the arguments of appellants or the examiner, we make reference to the brief and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of anticipation and obviousness relied upon by the examiner as support for the prior art rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the brief along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the specification in this application does fail to comply with the written description requirement of 35 U.S.C. § 112. We are also of the view that the evidence relied upon does not support either of the examiner's rejections based on the prior art. Since the examiner's rejection under 35 U.S.C. § 112 applies to all pending claims, we affirm.

We consider first the examiner's rejection of all pending claims under the first paragraph of 35 U.S.C. § 112. The examiner's rejection is clearly directed to the written description requirement of 35 U.S.C. § 112. Specifically, the

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examiner objects to the recitation in independent claims 87 and 97 of a detection circuit that determines whether the head is within an acceptable flying height range independently of flying height data obtained from the disk drive at other than the substantially constant flying height [claim 87] or at a predetermined flying height [claim 97]. The examiner finds no support in the specification for the detection circuit making its determinations independently of flying height data obtained from the disk drive. The examiner asserts that the determinations of the detection circuit are dependent upon known threshold or calibration values which are obtained from at least a maximum flying height of the disk drive [final rejection, pages 2-3, incorporated into examiner's answer at page 3].

Appellants argue that the specification makes it clear that the flying height determination occurs while the head is at a substantially constant flying height by comparing a read signal resolution value, responsive to a ratio of read signals from the first and second data patterns, to a predetermined threshold resolution value stored in RAM. Appellants assert that the specification does not require that these predetermined threshold values be obtained from the disk drive. They note that these values could be calculated before the disk drive is manufactured and then stored in the RAM of the drive [brief, pages 6-9].

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The examiner responds that the cited portions of the specification do not support appellants' argument that the threshold values are determined during disk manufacture. The examiner repeats his finding that the threshold values of the claimed invention are not independently determined as claimed [answer, pages 4-5].

The purpose of the written description requirement is to ensure that the applicants convey with reasonable clarity to those skilled in the art that they were in possession of the invention as of the filing date of the application. For the purposes of the written description requirement, the invention is "whatever is now claimed." Vas-cath, Inc. v. Mahurkar, 935 F.2d 1555, 1564, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). The disclosed invention requires that the measured flying height be compared to predetermined threshold values which are known to represent good and/or bad flying height values. The specification does not disclose that these threshold values are obtained independently of flying height data obtained from the disk drive. There is every reason to believe that the threshold data stored in the RAM must come from previously determined measurements of the disk drive at various predetermined flying heights. We agree with the examiner that the portions of the specification identified by appellants fail to support appellants' argument regarding

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independent measurements. This independent feature of the claimed invention was added to distinguish over the applied prior art. We are not inclined to accept such a claim modification without clear support for such modification in the specification. We find no support in appellants' specification for the recitation of independence as recited in all of the claims on appeal. Therefore, we sustain the examiner's rejection of all the claims on appeal.

We now consider the examiner's rejection of claims 87, 88, 93, 97, 98, 103, 110, 111, 120 and 121 under 35 U.S.C. § 102(b) as being anticipated by the disclosure of Brown. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

The examiner has indicated how he finds the appealed claims to be anticipated by Brown [final rejection, page 4, incorporated into examiner's answer at page 3]. Appellants argue

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that Brown requires that the flying height be adjusted to a reference clearance, such as zero clearance which is different from the substantially constant flying height, in order to determine flying height of a disk drive [brief, pages 10-12]. The examiner responds that appellants' claimed invention also requires the use of other readings [answer, page 5].

We will not sustain the examiner's rejection of the claims under 35 U.S.C. § 102. Regardless of whether there is support in the specification for limitations recited in a claim, the examiner is required to consider all claim limitations when making a prior art rejection. Independent claims 87 and 97 clearly recite that the detection circuit determines whether the head is within an acceptable flying height range independently of flying height data obtained from the disk drive at other than the substantially constant flying height [claim 87] or independently of flying height data obtained from the disk drive at a predetermined flying height [claim 97]. As argued by appellants, the determination of flying height in Brown requires that the drive be moved to a different reference flying height such as zero clearance and that additional measurements be made at the zero clearance flying height. Because Brown must additionally use these reference flying heights, the determinations in Brown

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are not made independently of other flying height data as required by the claims on appeal.

With respect to the claims rejected under 35 U.S.C. § 103 based on the teachings of Brown and Gyi, we will not sustain this rejection. The examiner's findings with respect to Brown are erroneous for reasons discussed above. Since Gyi does not overcome the deficiencies of Brown, the collective teachings of Brown and Gyi fail to establish a prima facie case of obviousness of the claims on appeal.

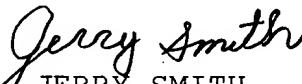
In summary, we have sustained the examiner's rejection of all claims on appeal under 35 U.S.C. § 112, but we have not sustained either of the examiner's prior art rejections. Therefore, the decision of the examiner rejecting 47-50, 53-58, 61-66, 87, 88, 91-98, 101-106, 108-113, 115, 118-123, 125 and 126 is affirmed.

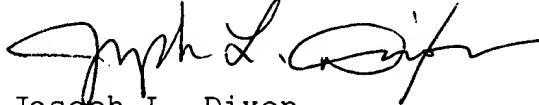
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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

  
Kenneth W. Hairston  
Administrative Patent Judge  
)

  
Jerry Smith  
JERRY SMITH  
Administrative Patent Judge  
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Joseph L. Dixon  
Administrative Patent Judge  
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